IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant:	**Joseph A. Bobier**	)	
		)	
Serial No:	**10/765,442**	)	Group Art Unit: **2631**
		)	
Filed:	**January 27, 2004**	)	Examiner: **Bocure, Tesfaldet**
		)	
For:	**Integer Cycle Frequency Hopping Modulation For the Radio Frequency Transmission of High Speed Data**	)	
		)	
Attorney Docket:	**P031696-08UT**	)	

Mail Stop AMENDMENT
Commissioner of Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

RESPONSE

In response to the Office Action mailed February 1, 2005, Applicant respectfully requests reconsideration of the disallowed Claims 1-17 in the above-referenced application in light of this response and amendment as stated in the following paragraphs.

The Examiner has rejected Claims 1, 3 and 5 under 35 U.S.C. 102(e) as being anticipated by Ishii (U.S. Patent Number 5,789,991) and the rest of the claims under 35 U.S.C. 103(a) as being unpatentable over Ishii in view of Soh (Patent Application Publication US 2002/0196865 and several other patents. The Examiner has stated in his rejection that Ishii discloses a system having a transmitter and receiver, wherein the transmitter comprising: a carrier frequency generator for generating carrier wavelets each defined by 360 degrees and each cycle having a zero crossing with zero energy at each zero crossing; and modulating the carrier frequency

according to the information signal to be transmitted, and each of the carrier modulated with the 0's and 1's having a corresponding high and low frequency carrier, claimed altered and not altered respectively. The Examiner points to Figure 5 and col.1, lines 10-37 of Ishii as disclosing this system indicating this disclosed system anticipates Applicant's invention.

Applicant respectfully disagrees with the Examiner's finding that Ishii alone or in view of Soh, or any or the other patents cited, anticipates or makes obvious Applicant's invention to someone skilled in the art.

Applicant's review of Ishii reveals it is in fact a system for modulating and demodulating binary data through the FSK process such that the number of cycles in the modulated binary one and binary zero are always the same but are of different frequencies as clearly shown in Figure 5. Applicant's system as claimed in this important application describes a method of modulating binary data such that the modulation event is represented by only one complete cycle (or wavelet defined as a complete cycle starting at the zero crossing point and ending at the zero crossing point) or an integer number of such complete cycles of a differing frequency.

Applicant appreciates Examiner's detailed and through review of this application as evidenced by the referenced prior art, but Applicant believes the Examiner has missed a very important feature of this invention that's not disclosed or even suggested in the Ishii patent. That is, the frequency change is applied only on the discrete complete wavelet or number of discrete complete wavelets where a wavelet is defined as a complete cycle starting at the zero crossing point and ending at the zero crossing point. This is totally different from any other type of modulation. By applying the frequency change on only complete discrete wavelets very little sideband energy is generated.

All the prior art sited, and all other prior art to the Applicants knowledge, apply modulation onto the carrier wavelets without regard to the discrete complete wavelets or pulses. It is obvious by looking at Figure 5 that Ishii operates in a similar manner, changing frequencies without regard to the zero crossing point of the cycle. Figure 5 clearly shows the last set of

cycles do not begin or end on the zero crossing point although there are 16 complete cycles as discussed in column 6 lines 38 through 53. Thus as the modulation frequency increases and the carrier frequency increases in attempts to increase the information transmission rate, the sidebands created by harmonics created by the modulation increase and require broader and broader bandwidths to transmit the information. The prior art cited attempts to work within this accepted framework of faster transmission means broader bandwidths and has not yet recognized the importance of applying the changes at the zero crossing points as disclosed in this important application.

Applicant's disclosure completely changes this accepted framework by applying the frequency change (modulation) only on a complete 360 degree cycle wavelet beginning at the zero crossing point and ending at the zero crossing point. By doing so very few low energy sidebands are created yet the frequency change or non frequency change of the complete discrete wavelet can be detected, thus transmitting digital information at a rate up to the carrier frequency.

Applicant's review of Claims 1 through 17 as written has revealed how the Examiner may have interpreted these important claims as describing the very different prior art. Thus Applicant has amended the independent claims below by adding language specifying that it is a "non-zero positive integer number of said wavelets" that are frequency modified making it clear that only complete discrete wavelets are changed since non-zero positive integer numbers only represent positive whole numbers, i.e. 1, 2, 3, and so on. The claims already limit the wavelet definition to a cycle starting at the zero crossing point and ending on the zero crossing point. None of the prior art cited by the Examiner alone or in combination disclose or even suggest the frequency changing of an integer number of complete discrete wavelets that begin and end at the zero crossing points, and thus applicant strongly believes this amendment and explanation should remove any question of anticipation or obviousness from the objected to claims.

It is well established case law that obviousness cannot be established by combining the teachings of the prior art to produce the claimed invention, absent some teaching suggestion or

incentive supporting the combination. See In re Greiger, 815 F 2.2d 686, 2 USPQ 2d 1276, 1278 (Fed Cir. 1987). The Courts have also stated "It is impermissible to use the claimed invention as an instruction manual or 'template' to piece together the teachings of the prior art so that the claimed invention is rendered obvious. This Court has previously stated that '[o]ne cannot use hindsight reconstruction to pick and choose among isolated disclosures in the prior art to deprecate the claimed invention." In re Frich, 972 F. 2d 1260, 23 USPQ 2d 1780, 1784 (Fed. Cir. 1992) (quoting In re Fine, 837 F. 2d 1071, 1075, 5 USPQ 2d 1596, 1600 (Fed. Cir. 1988)).

The Examiner has found in Soh and the other cited prior art, some, but not all, of the missing elements, not shown in Ishii, of Applicant's invention and pieced them together, thus stating Applicant's invention was obvious. The problem with this is the Ishii, Soh, and the other prior art patents are far removed from the type of invention claimed by the Applicant, with no suggestion in either of these patents of combining the unique complete discrete wavelet frequency changing technique into a signal and method generating such signal as claimed in claims 1-18.

Given the total differences in the RF signal and method of generation disclosed by the references as compared with Applicant's invention, Applicant strongly believes the Examiner has not presented a prima facie case of anticipation or obviousness. This is because the references cited by the Examiner, alone or taken together, do not anticipate nor do they teach a suggestion to combine or modify the references, such that the combination or modification, not to mention the complete discrete wavelet limitation required by the claims to result in Applicant's invention, would be sufficient to have made the claimed subject matter of the Applicant's invention anticipated or obvious to one of ordinary skill in the art. It is not enough that the Examiner present references that contain the assorted features of the invention (which Applicant believes the Examiner has not accomplished in this case). The Examiner must also show why it would appear that the reference would have been combined. The Ishii, Soh, and other disclosures in no way suggest an invention of a signal and method of data transmission as claimed in Applicant's application.

The present invention, i.e., an invention with the ability greatly increase the transmission of data and greatly decrease the bandwidth required, as defined in claims 1 and 17, is not anticipated or obvious and not taught by the references cited. The Examiner has used the claimed invention as a reference against itself as if it had preceded itself in time. Legal authority invalidates such an analytical or reverse engineering approach to patent examinations. It is not Applicant's burden to refute the Examiner's position that it would have been obvious to one of ordinary skill in this art at the time this invention was made, to arrive at the present invention in view of the Ishii, Filipovic et al, and Midya patents. It is the burden of the Examiner to show some teaching or suggestion in the references to support this allegation. Uniroyal, Inc. v. Rudkin-Wiley Corp., 5 USPQ2d 1434 (Fed. Cir. 1988).

With respect to evaluation of claims under 35 U.S.C. 103, "every portion of the ... claim must be considered in determining ... obviousness" [emphasis added]. In re Duva, 165 USPQ 90, 94 (CCPA 1967). In order to combine references, there must be a "suggestion of the desirability" of the combination. In re Noznik, Tatter and Obenauf, 178 USPQ 43 (CCPA 1973). An explanation as to the reason for combining the cited references was not proffered, only that obviousness was evident based on a speculative combination of the references. No combined teaching in the references would give one of ordinary skill in the art the invention defined by the claims.

A finding by the Examiner that a claimed invention would have been anticipated or obvious to one of ordinary skill in the art at the time the invention was made based merely upon finding similar elements in a prior art reference would be "contrary to statute and would defeat the congressional purpose in enacting Title 35." Panduit Corp. v. Dennison Mfg. Co., 1 USPQ2d 1593, 1605 (Fed. Cir. 1987). Thus, the Examiner cannot pick and choose among the individual elements of assorted prior art references to attempt to recreate the claimed invention. See, e.g., Azko N.V. v. United States International Trade Commission, 1 USPQ2d 1241, 1246 (Fed. Cir. 1986), cited with approval in SmithKline Diagnostics, Inc. v. Helena Laboratories Corp., 8 USPQ2d 1468 (Fed. Cir. 1988). As stated in In re Sernaker, 217 USPQ 1, 6 (Fed. Cir. 1983):

> ... prior art references in combination do not make an invention obvious unless something in the prior art references would suggest the advantage to be derived from combining their teachings.

The difficult task of the Examiner is to not "fall victim to the insidious effects of a hindsight syndrome wherein that which only the inventor taught is used against its teacher." W.L. Gore & Associates v. Garlock, Inc., 22 USPQ 303, 312-313 (Fed Cir. 1983).

As the Federal Circuit observed in Orthopedic Equipment Co. v. United States, 217 USPQ 193, 199 (Fed Cir. 1983):

> The question of nonobviousness is a simple one to ask, but difficult to answer ... The difficulty which attaches to all honest attempts to answer this question can be attributed to the strong temptation to rely on hindsight while undertaking this evaluation. It is wrong to use the patent in suit as a guide through the maze of prior art references, combining the right references in the right way as to achieve the result of the claims in suit. Monday morning quarterbacking is quite improper when resolving the question of nonobviousness ...

The amended claims in this important patent application are in fact drawn to a novel, useful and nonobvious invention. Applicant has also made minor amendments to the specification including correcting typographical errors and clarifying the invention. No new matter was introduced to the specification. Accordingly, Applicant respectfully submits that the invention claimed is clearly patentable over such prior art or any combination thereof.